

**PATENT**  
**Application No. 09/685,838**

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**In the Claims**

**Claims 1-33 (Canceled)**

**34. (New) A computer-implemented method for solving a current financial portfolio optimization problem comprising the steps of:**

**storing, on a computer, a plurality of data groups each associated with one of a plurality of anticipated financial portfolio optimization problems, each of the data groups including optimal solutions to a corresponding anticipated financial portfolio optimization problem, each of the data groups further including input values and intermediate calculation values associated with the corresponding anticipated financial portfolio optimization problem;**

**pre-solving, using said computer, the plurality of anticipated financial portfolio optimization problems;**

**compiling, using said computer, the plurality of data groups based on the results of the pre-solving step;**

**preparing and storing, on said computer, a plurality of look-up tables for identifying each of the plurality of data groups, the plurality of look-up tables containing equation names, RHS (Right Hand Side) values, and objective values pertaining to the plurality of anticipated financial portfolio optimization problems;**

**solving, using said computer, the current financial portfolio optimization problem using the stored data groups, the solving step including the steps of:**

**selecting, using user-defined functions, at least one of the stored plurality of data groups using the look-up tables; and**

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determining whether or not the selected data group contains optimal solutions to the current financial portfolio optimization problem;

wherein, if the determining step determines that the selected data group contains optimal solutions to the current financial portfolio optimization problem, then the optimal solutions included in the selected data group are output as optimal solutions to the current financial portfolio optimization problem; and

wherein, if the determining step determines that the selected data group does not contain optimal solutions to the current financial portfolio optimization problem, then the selected data group is modified using a search method, and the current financial portfolio optimization problem is iteratively solved using the modified data group to obtain optimal solutions to the current problem.

35. (New) A system for solving a current financial portfolio optimization problem comprising:

a storage unit, in a computer, storing a plurality of data groups each associated with one of a plurality of anticipated financial portfolio optimization problems, each of the data groups including optimal solutions to a corresponding anticipated financial portfolio optimization problem, each of the data groups further including input values and intermediate calculation values associated with the corresponding anticipated financial portfolio optimization problem; and

an optimization unit in said computer, said optimization comprising:

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means for pre-solving the plurality of anticipated financial portfolio optimization problems;

means for compiling the plurality of data groups based on the results of the pre-solving;

means for preparing and storing a plurality of look-up tables for identifying each of the plurality of data groups, the plurality of look-up tables containing equation names, RHS (Right Hand Side) values, and objective values pertaining to the plurality of anticipated financial portfolio optimization problems;

means for solving the current financial portfolio optimization problem using the stored data groups, the solving means including:

means for selecting, using user-defined functions, at least one of the stored plurality of data groups using the look-up tables; and

means for determining whether or not the selected data group contains optimal solutions to the current financial portfolio optimization problem;

wherein, if the determining means determines that the selected data group contains optimal solutions to the current financial portfolio optimization problem, then the optimal solutions included in the selected data group are output as optimal solutions to the current financial portfolio optimization problem; and

wherein, if the determining means determines that the selected data group does not contain optimal solutions to the current financial portfolio optimization problem, then the selected data group is modified using a search method, and the current financial portfolio optimization problem is iteratively solved using the modified data group to obtain optimal solutions to the current problem.